

Notice of Allowability

Application No.

09/742,115

Examiner

Julian Mercado

Applicant(s)

TERAHARA ET AL.

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1-6-04.
2. ☒ The allowed claim(s) is/are 1-4 and 10-16.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>1/6/04</u> | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

DETAILED ACTION

Remarks

This Office action is in reply to applicant's remarks filed January 6, 2004.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Bailey on February 3, 2004.

The application has been amended as follows:

1. Claims 5-9, drawn to a non-elected invention and presently withdrawn from consideration, have been canceled.

Claim Rejections - 35 USC § 102 and 103

The rejection of claims 1-4, 10 and 13-16 under 35 U.S.C. 102(b) or, in the alternative, under 35 U.S.C. 103(a) based on Helmer-Metzmann et al. has been withdrawn. The prior Office action had interpreted the limitation "wherein the one or more blocks having substantially no sulfonic acid group is/are introduced from precursors having a weight-average molecular weight of not less than 2000" as a product-by-process limitation insofar as the "blocks" being

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“introduced from precursors” were merely employed as starting materials, and as such, the limitation was found absent of any structural features which give breadth or scope to the product claim. In response to this interpretation, applicant’s reply asserts that “the molecular weight of a precursor introduced into the block polymer is typically and usually maintained before and after the block polymer is produced, that is, the molecular weight of the segment in the block polymer derived from the precursor is the same as, or more than, that of the precursor since cleavage of the carbon chain seldom occurs”. (response, page 3) In support thereof, applicant has supplied the technical reference “COMPREHENSIVE POLYMER SCIENCE, The Synthesis, Characterization, Reactions & Applications of Polymers”, which the examiner has carefully considered. The technical reference is found to support applicant’s assertion that the molecular weight of the formed block copolymer structure incorporates the molecular weight of the instant one or more block precursors. (pp. 373, 375 and 394) This structural difference between applicant’s claimed polymer electrolyte and that of Helmer-Metzmann et al. is deemed non-obvious and is not found as a routine modification of the product polymer electrolyte in Helmer-Metzmann et al., as the patentees do not teach or reasonably suggest aromatic polyether ketones having substantially no sulfonic acid group with a molecular weight of not less than 2000. As discussed in a prior Office action, Helmer-Metzmann et al. teaches one or more blocks having substantially no sulfonic acid group solely to the extent that the sulfonation step is carried out until the “desired degree of sulfonation has been reached” to levels ranging from 21% to 91%. (col. 2 line 35-41, Tables 1-3) That is, the one or more blocks having substantially no sulfonic acid group are not disclosed with sufficient specificity to have a molecular weight of not less than 2000.

Allowable Subject Matter

Claims 1-4 and 10-16 allowed.

Claims 1 and 2 are directed to an allowable product. Pursuant to the procedures set forth in the Official Gazette notice dated March 26, 1996 (1184 O.G. 86), claims 11 and 12 directed to the process of making or using the patentable product, previously withdrawn from consideration as a result of a restriction requirement, are now subject to being rejoined. Claims 11 and 12 are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

The following is an examiner's statement of reasons for allowance: the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding, in a first embodiment, a polymer electrolyte wherein one or more blocks having substantially no sulfonic acid group is introduced from precursors having a weight-average molecular weight of not less than 2000, whereby the molecular weight of the precursors introduced into the block polymer is maintained after the block polymer is produced, and regarding, in a second embodiment, a method of making the inventive polymer electrolyte.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's compliance with the examiner's prior request to provide related documents for the examiner's consideration, in compliance with MPEP 609, is gratefully acknowledged.

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The documents cited in the Form PTO-1449 re-submitted by applicant have now been considered, however, EP 0575807 is still not considered by the examiner as citation of this document without its accompanying translation, English-language abstract or statement of relevance is not in compliance with MPEP 609. As it appears to the examiner that applicant has made every attempt to comply with the examiner's request, in lieu of consideration of the EP 0575807 document the examiner has cited U.S. 5,362,836 which is a related document to EP 0575807. The "Family list" for EP 0575807 as obtained from the EPO website <http://ep.espacenet.com/> is attached.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


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Patrick Ryan
Supervisor Examiner
Tech